

## C L A I M S

1. A device for measuring characteristics of toolings, said device comprising:

5                   a radiation source adapted to generate radiation;  
                  means for diverting said radiation so as to pass through a  
                  profile in the toolings;  
                  detector adapted to receive said radiation that passed through  
                  the profile;

10           whereby the characteristics of toolings are processed from the detected  
          radiation that passes through the profile.

2. The device as claimed in Claim 1, wherein the toolings are chuck and roll  
15           in a seamer and the characteristics are the profiles of a gap between the  
          chuck and the roll.

3. The device as claimed in Claim 1, wherein said radiation is selected from  
20           a group consisting of electromagnetic radiation, light radiation or laser  
          light.

4. The device as claimed in Claim 1, further comprising at least one beam  
25           expander so as to generate a coherent beam.

5. The device as claimed in Claim 4, wherein said at least one beam  
30           expander is comprised of two lenses that expand the beam with a  
          minimal dissipation.

6. The device as claimed in Claim 1, wherein said means for diverting said  
          radiation is selected from a group of diverters such as prism, mirror, lens,  
30           or fiber-optic.

7. The device as claimed in Claim 1, wherein said means for diverting the radiation is a prism.
- 5 8. The device as claimed in Claim 7, wherein a first prism diverts the radiation towards the profile and wherein said second prism diverts the radiation that passes through the profile.
9. The device as claimed in Claim 8, wherein said detector and said source are positioned side by side and said first prism and said second prism  
10 are positioned in a predetermined distance and opposite to one another so as to form a bypass of said radiation.
10. The device as claimed in Claim 1, further comprising a magnification system adapted to receive said radiation that passes through the profile  
15 and transfers it so as to hit said detector.
11. The device as claimed in Claim 1, wherein said detector is a CCD camera.
- 20 12. The device as claimed in Claim 1, wherein the characteristics of toolings are a distance between the toolings.
13. The device as claimed in Claim 1, wherein the characteristics of toolings are the clearance between the toolings.
- 25 14. A method for measuring characteristics of toolings comprising:
  - providing a radiation source adapted to generate radiation;
  - providing a first means for diverting said radiation so as to pass through a profile in the toolings;
  - 30 providing a second means for diverting said radiation that passes through the profile;
  - directing the diverted radiation to a detector;

whereby the characteristics of the profile is processed from the detected radiation that passes through the profile.

- 5 15. The method as claimed in Claim 14, wherein said radiation is selected from a group consisting of electromagnetic radiation, light radiation or laser light.
- 10 16. The method as claimed in Claim 14, wherein the toolings are chuck and roll in a seamer and the characteristics are the profiles of a gap between the chuck and the roll.
- 15 17. The method as claimed in Claim 14, wherein said first means for diverting and said second means for diverting said radiation are selected from a group comprising diverters such as prism, mirror, lens, or fiber-optic.